

~~ENVIRONMENTAL PROTECTION AGENCY~~
REGION VI

1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

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JDM

April 27, 1973

OFFICE OF THE
REGIONAL ADMINISTRATOR

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. G. A. O'Brien
Lake Charles Refinery Manager
Continental Oil Company
P. O. Box 37
Westlake, Louisiana 70669

Re: Refuse Act Permit Application No. LA-07V-0XK-2-000401
Proposed Permit No. LA-0003926

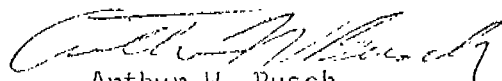
Dear Mr. O'Brien:

Enclosed is a copy of the permit which this Agency proposes to issue under the authority of the Federal Water Pollution Control Act Amendments of 1972, which permit will authorize a discharge from your facility located at Westlake, Louisiana. In the absence of evidence indicating a contrary course of action should be taken, a permit identical to that enclosed will be issued.

Also enclosed is a copy of a Public Notice to be issued on or about April 27, 1973, announcing our intention of issuing the proposed permit. The Fact Sheet referred to in the Public Notice is the third enclosure.

Any questions regarding the enclosures should be directed to Dr. John Dehn at the above address.

Sincerely yours,


Arthur W. Busch
Regional Administrator

3 Enclosures
Proposed NPDES Permit
Public Notice
Fact Sheet

cc: Louisiana Stream Control Commission

CCR 000036464



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

Permit No. LA 0003026

Name of permittee Continental Oil Company

Effective date _____

Expiration date April 30, 1978

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE PERMIT

In reference to the following application:

Application Number: LA-07V-0XK-2-000401

for a permit authorizing the discharge of any pollutant in compliance with the provisions of the Act of Congress enacted October 18, 1972, (96 Stat. 876) entitled the Federal Water Pollution Control Act Amendments of 1972 (hereinafter referred to as "the Act"),

Continental Oil Company

is authorized by the Regional Administrator, Region VI

to discharge from Continental Oil Company

Lake Charles Refinery

P. O. Box 37

Westlake, Louisiana 70669

to Bayou Verdine and the Calcasieu River

in accordance with the following general and special conditions:

CCR 000036465

General Conditions

1. a. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

b. Facility expansions, production increases, or process modifications which result in new, increased, decreased or characteristically different discharges of pollutants must be reported by submission of a new NPDES application at least 180 days in advance of the event which results in such change in effluent; provided, however, that such submission shall not, in and of itself, enlarge or modify any rights of permittee under this permit.

c. The discharge of any pollutant more frequently than or at a level in excess of that identified and authorized by this permit or discharge of a pollutant not authorized by the permit shall constitute a violation of the terms and conditions of this permit..

d. Permittee shall comply with each and every condition, provision and limitation in this permit and compliance with one or more but less than all conditions, provisions and limitations shall not constitute a ground or grounds of defense in any proceeding against permittee for violation of one or more of such conditions, provisions or limitations.

2. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its terms for cause including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any condition or material fact upon which this permit is based that requires either a temporary or permanent reduction or elimination of the authorized discharge.

3. Notwithstanding (2) above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under section 307(a) of the Act for a toxic pollutant which is present in the discharge authorized herein and such standard or prohibition is more stringent than any limitation upon such pollutant in this permit, the Regional Administrator shall revise or modify this permit in accordance with the toxic effluent standard or prohibition and so notify the permittee.

CCR 000036466

4. The permittee shall allow the Regional Administrator and the Louisiana Stream Control Commission, and/or their authorized representatives, upon the presentation of credentials;

a. To enter into, upon, or through the permittee's premises or other premises under the control of permittee, where, or in which, an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit or the Act;

b. To have access to and copy any records required to be kept under the terms and conditions of this permit or the Act;

c. To inspect any monitoring equipment or monitoring method required in this permit; or,

d. To sample any pollutants discharged.

5. The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

6. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

7. This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

CCR 000036467

Special Conditions

1. Operation of Wastewater Facilities

The permittee shall collect and treat all wastewater flows in such a manner as to maximize removal of pollutants from each discharge stream.

2. - Effluent Limits

a. General

(1) Except as specified in 2b below, the permittee is authorized to discharge to Bayou Verdine and the Calcasieu River a final effluent which shall not include pollutants in excess of the amounts specified on the application dated March 9, 1973, including any modification thereto, for the permit.

b. Specific

(1) Until December 31, 1975, the permittee is authorized to discharge to Bayou Verdine and the Calcasieu River an effluent whose characteristics shall not exceed the values listed below.

Discharge Serial No.	Parameter	<i>Based on 2000 gpm</i>	Oper. Avg. (lbs/day)	30-Day Avg. (lbs/day)	Max. Daily (lbs/day)	
Sum of 001,	BOD ₅	<i>80 ppm</i>	1,955	2,440	4,000	= <i>166</i>
002, 004,	COD	<i>200 ppm</i>	5,750	7,187	10,000	= <i>416</i>
006, 007	TOC	<i>80 ppm</i>	2,125	2,826	3,825	= <i>159</i>
	TSS	<i>80 ppm</i>	2,102	2,796	4,000	= <i>166</i>
	Ammonia	<i>65 ppm</i>	366	460	700	= <i>29</i>
	Oil & Grease	<i>72 ppm</i>	1,720	2,150	3,200	= <i>133</i>
	Phenol	<i>0.42</i>	10	12	15	= <i>0.62</i>
	Chromium	<i>0.33</i>	8	10	12	= <i>0.50</i>

*of 2000 gpm effluent
in discharge*

(2) After December 31, 1975, the permittee is authorized to discharge to Bayou Verdine and the Calcasieu River an effluent whose characteristics shall not exceed at any time the values listed on the next page.

CCR 000036468

Discharge Serial No.	Parameter	Oper. Avg. (lbs/day)	30-Day Avg. (lbs/day)	Max. Daily (lbs/day)	<i>If 2000 gpm is assumed</i>
Sum of 001, 002 & 007	BOD ₅ <i>81% Cut</i>	262	349	786	= <i>24.5 ppm</i>
	COD <i>77% Cut</i>	1,332	1,776	2,398	= <i>44.3 ppm</i>
	TOC <i>78% Cut</i>	480	640	864	= <i>26.0 ppm</i>
	TSS <i>70% Cut</i>	402	536	1,206	= <i>32.3 ppm</i>
	Ammonia <i>68% Cut</i>	128	170	230	= <i>4.2 ppm</i>
	Oil & Grease <i>93% Cut</i>	102	136	230	= <i>4.2 ppm</i>
	Phenol <i>76% Cut</i>	2.0	2.5	3.6	= <i>0.81 ppm</i>
	Chromium <i>43% Cut</i>	4.0	5.0	7.0	= <i>0.13 ppm</i>
	Sulfide <i>new std</i>	2.5	3.4	4.5	= <i>0.08 ppm</i>

(3) The pH of the effluent shall not be less than 6.0 nor greater than 9.0 at any time.

(4) The effluent shall contain neither visible foam nor visible floating solids at any time.

(5) The effluent shall not contain detectable, settleable solids.

(6) The effluent limitations contained above are based on a present, daily average plant production level of 85,000 barrels per day of crude oil and 16,000 barrels per day equivalent purchased feed.

3. a. Compliance Schedule

The permittee shall achieve the effluent levels described in Section (2) above in accordance with the following compliance schedule:

Completion of preliminary plans by December 31, 1973

Final plans by August 31, 1974

Contract awarded by December 31, 1974

Commencement of construction by March 31, 1975

Completion of construction by September 30, 1975

Operational level attained by December 31, 1975

CCR 000036469

b. Reporting and Noncompliance

Not later than fourteen (14) days following each interim date and the final date of compliance the permittee shall provide the Regional Administrator with written notice of the permittee's compliance or non-compliance with the interim or final requirements.

In the event of noncompliance with any scheduled item, such notice shall include the explanation therefor and the estimated date on which compliance shall take place.

4. Monitoring and Reporting

The permittee shall monitor and record the quality and quantity of each discharge according to the following schedule and other provisions:

Sampling Schedule:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002, 004, 006, 007	Flow	Continuous	Record
	pH	Continuous	Record
	Temperature	Continuous	Record
	BOD ₅	Once per week	24 hr. composite
	COD	3 times/week	24 hr. composite
	TOC	3 times/week	24 hr. composite
	TDS	3 times/week	24 hr. composite
	TSS	3 times/week	24 hr. composite
	Ammonia	3 times/week	24 hr. composite
	Oil & Grease	Daily - 3 grabs per day	Grab
	Phenol	3 times/week	24 hr. composite
	Chromium	3 times/week	24 hr. composite
	Sulfide	3 times/week	24 hr. composite

In addition to the Monitoring and Reporting requirements set forth in this permit, the permittee shall establish, maintain and report any other information which the Regional Administrator may require to carry out the objectives of the Act.

CCR 000036470

a. Quality Control

The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals frequent enough to insure accuracy of measurements, or shall insure that both activities will be conducted.

Samples shall be representative of the volume and quality of effluent discharged over the sampling and reporting period.

All samples are to be taken during normal operating hours.

b. Recording

The permittee shall maintain records of all information resulting from any monitoring activities required of him in his permit; any records of monitoring activities and results shall include for all samples: the date, exact place, and time of sampling, identity of person taking sample, the dates analyses were performed, identity of person performing the analyses, the analytical techniques/methods used, and the results of such analyses.

All sampling and analyses records mentioned in the preceding paragraph, shall be retained for a minimum of three years. This period will be extended during the course of any unresolved litigation, or administrative proceeding, or when so requested by the Regional Administrator. The permittee also shall retain all original strip-chart recordings from any continuous monitoring instrumentation, and any calibration and maintenance records, for a minimum of three years. This period will be extended during the course of any unresolved litigation or administrative proceedings or when so requested by the Regional Administrator.

The permittee shall provide true and correct copies of the above records and shall demonstrate the accuracy of the flow measuring device upon request of the Regional Administrator.

The permittee shall identify the effluent sampling point used for each discharge outfall, which effluent sampling point shall be subject to the approval of the Regional Administrator.

c. Sampling and Analysis

The appropriate analytical and sampling methods used must conform to the following references. However, different but equivalent methods are allowable if they receive the prior, written approval of the Regional Administrator.

1. Standard Methods for the Examination of Water and Wastewaters, 13th Edition, 1971, American Public Health Association, New York, New York 10019.
2. A.S.T.M. Standards, Part 23, Water; Atmospheric Analysis, 1970, American Society for Testing and Materials, Philadelphia, Pennsylvania 19103.
3. Methods for Chemical Analysis of Water and Wastes, July, 1971, Environmental Protection Agency Water Quality Office, Analytical Quality Control Laboratory, 1014 Broadway, Cincinnati, Ohio 45210.

d. Reporting

The results of the above monitoring requirements shall be reported on the Discharge Monitoring Report Form in the units specified. The permittee shall include in this report any previously approved non-standard methods used. Permanent elimination of a discharge shall be brought to the attention of the Regional Administrator within 15 days by a special, written notification. A written report shall be submitted to the Regional Administrator if there have been any modifications in the waste collection, treatment, and disposal facilities, changes in operational procedures; or other significant activities which alter the nature and frequency of the discharges or otherwise concern the conditions of this permit.

All reports shall be signed by the principal executive officer or corporate official in a corporation, of at least the level of vice-president, or by his agent, if a signed delegation of authority has been submitted and is on file with the Regional Administrator and the agent thereby designated is responsible for the operation of the discharging facility.

The permittee shall (1) implement the monitoring schedule within 30 days after issuance of this permit, (2) submit the reporting form, properly filled in and signed within 75 days after issuance of this permit, (3) shall submit all subsequent reports on the fifteenth day of the month thereafter, to the Regional Administrator and the Louisiana Stream Control Commission.

e. Other Requirements

The permittee shall transmit, along with the Discharge Monitoring Report Form, to the Regional Administrator a duplicate copy of any reports on radioactive liquid releases required to be submitted to the Atomic Energy Commission.

5. Oil Discharges

There shall be no discharge of harmful quantities of oil, as defined pursuant to 40 CFR 110, including (1) any amendments or revisions made subsequent hereto, or (2) any more restrictive limitations which may be imposed otherwise by law or regulation. The authorization of this permit does not preclude the institution of any legal action, nor relieve the permittee from any liabilities, penalties or responsibilities established by Section 311 of the Federal Water Pollution Control Act, by any subsequent amendments thereto, or by any superseding Federal or State legislation.

6. Other Materials

Other materials ordinarily produced or used in the operation of this facility and discharged which have been specifically identified in the application, may be discharged at the maximum frequency and maximum level noted in the application, provided:

a. They are not

- (1) hazardous under provisions of Section 311 of the Act, or
- (2) toxic under the provisions of Section 307 of the Act, or
- (3) toxic within the meaning of Section 502(13) of the Act, or
- (4) known or suspected to be hazardous or toxic by the permittee.

b. The discharge of such materials will not violate applicable water quality standards; and

c. the permittee is not notified by the Regional Administrator to eliminate or reduce the quantity of such materials entering the watercourse.

7. Solids Disposal

Collected screenings, sludges, and other solids removed from water or liquid wastes shall be disposed of in such a manner as to prevent entry of such materials into waters of the United States.

8. Noncompliance

In the event the permittee is unable to comply with any of the conditions of this permit for whatever reason, including but not limited to

- a. breakdown of waste treatment equipment; (biological and

physical-chemical systems including, but not limited to, all pipes, transfer pumps, compressors, collection ponds or tanks for the segregation of treated or untreated wastes, ion exchange columns, or carbon absorption units),

- b. accidents caused by human error or negligence, or
- c. other causes such as natural phenomena,

the permittee shall notify the Regional Administrator and the Louisiana Stream Control Commission in writing, as soon as he or his agents have knowledge of the incident. The written notification shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps are being taken to correct the problem from recurring.

9. Emergency Action - Electric Power Failure

The permittee shall

a. within 180 days after issuance of this permit, provide an alternate source of electric power to operate all waste treatment facilities or

b. indicate in writing, within thirty (30) days after the effective date of this permit, to the Regional Administrator, that production shall be controlled or the discharge shall be handled in such a manner that, in the event the primary source of electric power to the waste treatment facilities fails, any discharge into the receiving waters will comply with special condition 2 requirements and all other terms and conditions of this permit or the Act.

The alternate power supply, as referred to in (a) above, whether from a generating unit located at the plant site or purchased from an independent producer of electricity, must be separate from the existing power source used to operate the waste treatment facilities. If a separate facility located at the plant site is to be used, the permittee shall certify in writing to the Regional Administrator and the Louisiana Stream Control Commission when the facility is completed and prepared to generate power.

10. Bypass of Waste Treatment Facilities

There shall be no bypass of the waste treatment facility at any time where such bypass would allow the entry of untreated or partially treated wastes to receiving stream waters. A bypass of waste treatment facilities is permissible in those instances where the discharge is composed of storm water, once-through cooling water and other waters which are also uncontaminated.

11. Exceptions to Treatment by Permittee

a. Future Connection to Municipal or Other Treatment System

Should the permittee anticipate connection to a municipal system or other treatment system other than one owned and operated for the sole and exclusive use by permittee, the permittee shall submit to the Regional Administrator the document (municipal waste ordinance, municipal waste permit, contract, etc.) evidencing the terms and conditions by which the municipality or other agency will accept and treat permittee's industrial wastewater either (1) not later than 120 days prior to connection or (2) within 10 days of establishment of the relationship whichever is earlier.

Notwithstanding such future connection to a municipal or other treatment system or provision therefor, this permit and all its terms and conditions shall remain in full force and effect until modified, revised, or revoked by the Administrator.

b. Use of Disposal Well Not Authorized

Disposal of waste into an injection or disposal well is not authorized by this permit.

12. Spill Prevention and Containment Plan

Permittee shall prepare and submit to the Regional Administrator within 120 days of issuance of this permit, a Spill Prevention, Containment and Countermeasure Plan, in accordance with Section 311(j)(1)(c) of the Act, for the facility covered by this permit. Such plan shall include information and procedures relative to the prevention of spills and unplanned discharges of oil and hazardous substances:

a. a description of the reporting system which will be used to alert responsible facility management and appropriate legal authorities;

b. a description of preventive facilities (including overall facility plot) which prevent, contain or treat spills and unplanned discharges;

c. a list of all oil and hazardous or potential hazardous materials used, processed, or stored at the facility which may be spilled into permitted discharges;

d. a brief description of recent spills as they relate to subsequent changes which mitigate against recurrence; and

e. a compliance schedule for additional facilities which might be required for (c) above, but which are not yet operational.

13. Reapplication

If the permittee desires to continue to discharge after the expiration of this permit, he shall reapply not later than 180 days before this permit expires, on the application forms then in use.

14. Definitions

For purposes of this permit, the definitions on the attached sheet shall apply.

15. Other Special Conditions

The permittee shall collect and treat all waste flows within the confines of his industrial complex, including tank water draw-offs, tank roof drain runoff and any stormwater which has become polluted through industrial activity. In addition, all ballast and bilge water from ships moored at permittee's facilities must be collected on shore and handled for treatment in such a manner so as to conform to effluent limitations of the permit.

Temperature of the effluent shall be equal to, or less than, 97°F based on a 30-day average, but never to exceed 115°F for any instantaneous maximum. The effluent shall not raise the temperature of the receiving body more than 3°C above the normal ambient water temperature nor cause the temperature of the receiving body to exceed 35°C .

CCR 000036476

This permit shall become effective on the date of the Regional
Administrator's signature and shall expire on April 30, 1978.

By authority of the Regional Administrator, Region VI :

CCR 000036477

DEFINITIONS

The term "Act" means the Federal Water Pollution Control Act, as amended, Public Law 92-500.

The term "Administrator" means the Administrator of the U. S. Environmental Protection Agency.

The term "applicable effluent standards and limitations" means all State and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards of performance, toxic effluent standards and prohibitions, and pretreatment standards.

The term "applicable water quality standards" means all water quality standards to which a discharge is subject under the Act and which have been (1) approved or permitted to remain in effect by the Administrator following submission to him pursuant to section 303(a) of the Act, or (2) promulgated by the Administrator pursuant to section 303(b) or 303(c) of the Act.

The term "contiguous zone" means the entire zone established or to be established by the United States under Article 24 of the Convention of the Territorial Sea and the Contiguous Zone.

The term "discharge" when used without qualification includes a discharge of a pollutant and a discharge of pollutants.

The term "discharge of pollutant" and the term "discharge of pollutants" each means: (1) Any addition of any pollutant to navigable waters from any point source, (2) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

The term "effluent limitations" means any restriction established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance.

The term "Environmental Protection Agency" means the U. S. Environmental Protection Agency.

CCR 000036478

The term "interstate agency" means an agency of two or more States established by or pursuant to an agreement or compact approved by the Congress, or any other agency of two or more States, having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator.

The term "municipality" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 203 of the Act.

The term "National Pollutant Discharge Elimination System" (hereinafter referred to as "NPDES") means the system for issuing, conditioning, and denying permits for the discharge of pollutants from point sources into the navigable waters, the contiguous zone, and the oceans, by the Administrator of the Environmental Protection Agency pursuant to section 402 of the Federal Water Pollution Control Act, as amended.

The term "navigable waters" means the waters of the United States.

The term "permit" means any permit or equivalent document or requirement issued to regulate the discharge of pollutants.

The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation or vessel or other floating craft, from which pollutants are or may be discharged.

The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean (1) "sewage from vessels" or (2) water, gas or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

CCR 000036479

The term "pollution" means the man-made or man-induced alteration of the natural chemical, physical, biological, and radiological integrity of water.

The term "Regional Administrator" means one of the Regional Administrators of the U. S. Environmental Protection Agency.

The term "schedule of compliance" means a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard.

The term "sewage" means human body wastes and the wastes from toilets and other receptacles intended to receive or retain body wastes.

The term "sewage sludge" shall mean the solids and precipitates separated from wastewater by unit processes.

The term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

The term "State water pollution control agency" means the State agency designated by the Governor, having responsibility for enforcing State laws relating to the abatement of pollution.

The term "territorial seas" means the belt of the seas measured from the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters, and extending seaward a distance of 3 miles.

The term "treatment works" means any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage or industrial wastes of a liquid nature to implement section 201 of the Act, or necessary to recycle or reuse water at the most economical cost over the estimated life of the works, including intercepting sewers, sewage collection systems, pumping, power, and other equipment, and their appurtenances; extension, improvement, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works, including site acquisition of the land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment.

The term "toxic pollutant" means those pollutants, or combinations of pollutants, including disease-causing agents, which after discharge and upon exposure, ingestion, inhalation or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will, on the basis of information available to the Administrator, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring.

The term "operating average" means the expected daily pollutant constituent load contained in the final treated effluent wastewaters discharged from the permitted facility operated at the production rate and/or operating rate specified in this permit.

The term "30-day average" means the arithmetic average of the daily pollutant constituent loads obtained during any 30 day period.

The term "maximum daily" means the maximum quantity or concentration of pollutant constituents authorized for discharge during any 24 hour period.

The term "composite sample" means a combination of individual samples obtained at regular intervals over a time period. Either the volume of each individual sample is proportional to discharge flow rates or the sampling interval (for constant volume samples) is proportional to the flow rates over the time period used to produce the composite.

The term "grab sample" means an individual sample collected in less than 15 minutes.

The term "uncontaminated water" means water which has no direct contact with any product or raw material and which does not contain a level of constituents detectably higher than that of the intake water.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

PUBLIC NOTICE

Permit No. LA-0003926

Application No. LA-07V-0XK-2-000401

April 27, 1973

NOTICE - Application for NPDES Permit to Discharge to waters of the United States.

Continental Oil Company

Lake Charles Refinery

P. O. Box 37

Westlake, Louisiana 70669

has applied for an NPDES permit to discharge pollutants into waters of the United States.

Applicant is a petroleum refinery processing 96,000 barrels of crude oil per day. Five existing discharges are described in the application. Discharge Serial No. 001 contains process water, contaminated storm water and spent caustic. This stream is treated biologically and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 002 contains storm water runoff, cooling tower blowdown, once-through cooling water, and power plant wastes. This stream undergoes primary settling and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 004 consists of boiler blowdown, cooling water, surface runoff, and excess water from the coker cooling pond. Discharge Serial Nos. 006 and 007 consist of storm water from tank farm areas. Discharges 001, 002, 004 and 006 are discharged into Bayou Verdine, one and one-half miles upstream from the Calcasieu River. Discharge 007 is presently discharged into a ditch with the discharge point one-half mile from the Calcasieu River.

The facility from which these discharges are made is an existing facility presently discharging as described above.

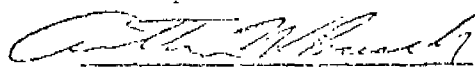
CCR 000036482

On the basis of preliminary staff review, the Environmental Protection Agency, after consultation with the State of Louisiana proposes a permit to discharge subject to effluent limitations developed under authority of the Federal Water Pollution Control Act Amendments of 1972 (FWPCA).

These proposed determinations are tentative. Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing, to the letterhead address, attention: Permits Branch, within 30 days of the date of this notice. All comments or objections received prior to the expiration of this 30-day period will be considered in the formulation of final determinations regarding the application.

A public hearing on the issuance of this permit will be held beginning at 1:00 p.m. on May 31, 1973, at Sheraton-Delta Motor Hotel, Delta Ballroom, Canal St. & Claiborne Ave., New Orleans, La. 70112. An initial decision concerning modifications, if any, of the proposed permit conditions will be issued within 20 days of the public hearing and the expiration of the 30-day comment period. The result of this initial decision as to the proposed conditions will become the Regional Administrator's final determination 10 days thereafter unless a request for finding of fact and opinion is submitted in writing to the Regional Administrator prior to the final determination. Requirements to be satisfied prior to the granting of a request to be a party to the hearing may be obtained through the fact sheet.

The application, proposed permit (including proposed effluent statements and special conditions), fact sheet, comments received, and other information are on file and may be inspected and copied in Room 1142, 1600 Patterson Street, Dallas, Texas 75201, at any time between 8:00 a.m. and 4:30 p.m., Monday through Friday. A fact sheet setting out a more detailed description of the existing discharges, tentative determinations, limitations, procedures for submission of statements and testimony at any public hearing and for formulation of final determinations is available upon request and may be obtained by writing to the above address or by calling the Permits Branch Office at (214) 749-1933.



Regional Administrator, Region VI

CCR 000036483



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

FACT SHEET

APPLICATION FOR NPDES PERMIT TO DISCHARGE TO WATERS OF THE
UNITED STATES

Permit No. LA 0003026

Application No. LA-07V-0XK-2-000101 April 27, 1973

Continental Oil Company

Lake Charles Refinery

P. O. Box 37

Westlake, Louisiana 70669

has applied for an NPDES permit to discharge pollutants into waters of the United States.

Applicant is a petroleum refinery processing 96,000 barrels of crude oil per day. Five existing discharges are described in the application. Discharge Serial No. 001 contains process water, contaminated storm water and spent caustic. This stream is treated biologically and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 002 contains storm water runoff, cooling tower blowdown, once-through cooling water, and power plant wastes. This stream undergoes primary settling and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 004 consists of boiler blowdown, cooling water, surface runoff, and excess water from the coker cooling pond. Discharge Serial Nos. 006 and 007 consist of storm water from tank farm areas. Discharges 001, 002, 004 and 006 are discharged into Bayou Verdine one and one-half miles upstream from the Calcasieu River. Discharge 007 is discharged into a ditch, with the discharge point one-half mile from the Calcasieu River.

CCR 000036484

The receiving waters are classified for propagation of aquatic life, recreation, navigation and low grade industrial supply when necessary adaptations are made by industry.

A more complete description of the discharges and a sketch of their locations follow below.

The application, proposed permit including proposed effluent limitations and special conditions, comments received, and other information is on file and may be inspected and copied in Suite 1142, 1600 Patterson Street, Dallas, Texas 75201, at any time between 8:00 a.m. and 4:30 p.m., Monday through Friday. The proposed staff determinations contained herein are tentative. Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the above address, attention: Permits Branch, within 30 days of the date of this Fact Sheet. The application number should appear next to the above address on the first page of any submitted comments. All comments or objections received within 30 days of the date of this Fact Sheet will be considered in the formulation of final determinations regarding the application.

A public hearing on the issuance of this permit will be held beginning at 1:00 p.m. on May 31, 1973, at Sheraton-Delta Motor Hotel, Delta Ballroom, Canal St. & Gralonde Ave., New Orleans, La. 70112. ~~Requests to be a party to the public hearing must be made in writing to the Regional Administrator at the letterhead address and must state with particularity any objection to the issuance of the proposed permit and the issues of fact, law or policy which are proposed to be considered at the hearing. All hearing proceedings will be transcribed verbatim and made available to the public at cost. The hearing will be conducted in conformance with the "Notice of Proposed Rule Making" for the National Pollutant Discharge Elimination System as published in the Federal Register of January 11, 1973 - Section 125.34. Pursuant to guidelines set forth in that proposed regulation the hearing will be held in conformance with the requirements of subparagraphs (l), (m) and (n) of Section 125.34 and all testimony will be taken under oath, with cross-examination allowed. Any party to the hearing may give oral or written statements and recommendations; other persons in attendance can submit written statements.~~

An initial decision concerning modifications, if any, of the proposed permit conditions will be issued within 20 days of the public hearing and the expiration of the 30-day comment period. The result of this initial decision as to the proposed permit will become the Regional Administrator's final determination 10 days thereafter unless a written request for finding of fact and opinion is submitted to the Regional Administrator prior to the final determination date. Upon issuance of any requested findings of fact and opinion by the Hearing Officer, the Regional Administrator will simultaneously issue his final determination.

CCR 000036485

DESCRIPTION OF EXISTING DISCHARGES (As reported by applicant):

Discharge _____: Sum of 001, 002, 004, 006 and 007

Average Flow: 2,960,000 gallons per day = 2056 gpm

<u>Constituents</u>	<u>Lbs/Day</u>
pH	6.3 - 8.5
Temperature	70° - 115°F
BOD ₅	1,955
COD	5,750
TDS	28,800
TSS	2,102
Ammonia	366
Oil & Grease	1,720
Phenol	9.8
Chromium	13.4

PROPOSED DETERMINATIONS

On the basis of preliminary staff review, the Environmental Protection Agency proposes to issue a permit to discharge subject to effluent limitations and certain other conditions. The following is a brief description of the proposed effluent limitations and special conditions.

PROPOSED EFFLUENT LIMITATIONS:

(1) The pH of the effluent shall not be less than 6.0 nor greater than 9.0 at any time.

(2) Temperature of the effluent shall be equal to, or less than, 97°F based on a 30-day average, but never to exceed 115°F for any instantaneous maximum. The effluent shall not raise the temperature of the receiving body more than 3°C above the normal ambient water temperature nor cause the temperature of the receiving body to exceed 36°C.

(3) The effluent shall contain neither visible foam nor visible floating solids at any time.

(4) The effluent shall not contain detectable, settleable solids.

(5) The effluent limitations which follow are based on a present, daily average plant production level of 85,000 barrels per day crude oil and 16,000 barrels per day equivalent purchased feed.

CCR 000036486

Until December 31, 1975, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002, 004, 006, 007	BOD ₅	1,955	2,440	4,000
	COD	5,750	7,187	10,000
	TOC	2,125	2,826	3,825
	TSS	2,102	2,796	4,000
	Ammonia	366	460	700
	Oil & Grease	1,720	2,150	3,200
	Phenol	10	12	15
	Chromium	8	10	12

After December 31, 1975, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002 & 007	BOD ₅	252	349	786
	COD	1,332	1,776	2,398
	TOC	480	640	864
	TDS	Report		
	TSS	402	536	1,206
	Ammonia	128	170	230
	Oil & Grease	102	136	230
	Phenol	2.0	2.5	3.6
	Chromium	4.0	5.0	7.0
	Sulfide	2.5	3.4	4.5

PROPOSED SCHEDULE FOR COMPLIANCE

The permittee would be required to achieve the effluent levels described above in accordance with the following compliance schedule:

Completion of preliminary plans by December 31, 1973

Final plans by August 31, 1974

Contract awarded by December 31, 1974

Commencement of construction by March 31, 1975

Completion of construction by September 30, 1975

Operational level attained by December 31, 1975

PROPOSED SPECIAL CONDITIONS

The applicant would be required to operate his treatment facilities at maximum efficiency at all times.

MONITORING AND REPORTING

The applicant would be required to monitor his discharges according to the following sampling schedule and report the results to the Regional Administrator and the Louisiana Stream Control Commission each month.

Sampling Schedule:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002, 004, 006 & 007	Flow	Continuous	Record
	pH	Continuous	Record
	Temperature	Continuous	Record
	BOD ₅	Once per week	24 hr. composite
	COD	3 times/week	24 hr. composite
	TOC	3 times/week	24 hr. composite
	TDS	3 times/week	24 hr. composite
	TSS	3 times/week	24 hr. composite
	Ammonia	3 times/week	24 hr. composite
	Oil & Grease	Daily - 3 grabs per day	Grab
	Phenol	3 times/week	24 hr. composite
	Chromium	3 times/week	24 hr. composite
	Sulfide	3 times/week	24 hr. composite

In addition to the Monitoring and Reporting requirements set forth above, the permittee would be required to establish, maintain and report any other information which the Regional Administrator may require to carry out the objectives of the Federal Water Pollution Control Act Amendments of 1972.

CCR 000036488

APPLICABLE WATER QUALITY STANDARDS OF RECEIVING WATERS

pH - Within the range of 6.5 - 8.5.

Dissolved Oxygen - Not less than 50% of saturation at existing water temperature.

Temperature - Not to be raised more than 3°C above normal ambient water temperature, nor to exceed a maximum of 36°C.

Oils - There shall be no slicks of free or floating oil present in sufficient quantities to interfere with the designated uses, nor shall emulsified oils be present in sufficient quantities to interfere with the designated uses.

Toxic Materials - None present in quantities that alone or in combination will be toxic to animal or plant life. In all cases the level shall not exceed the TLM_{48/10}.

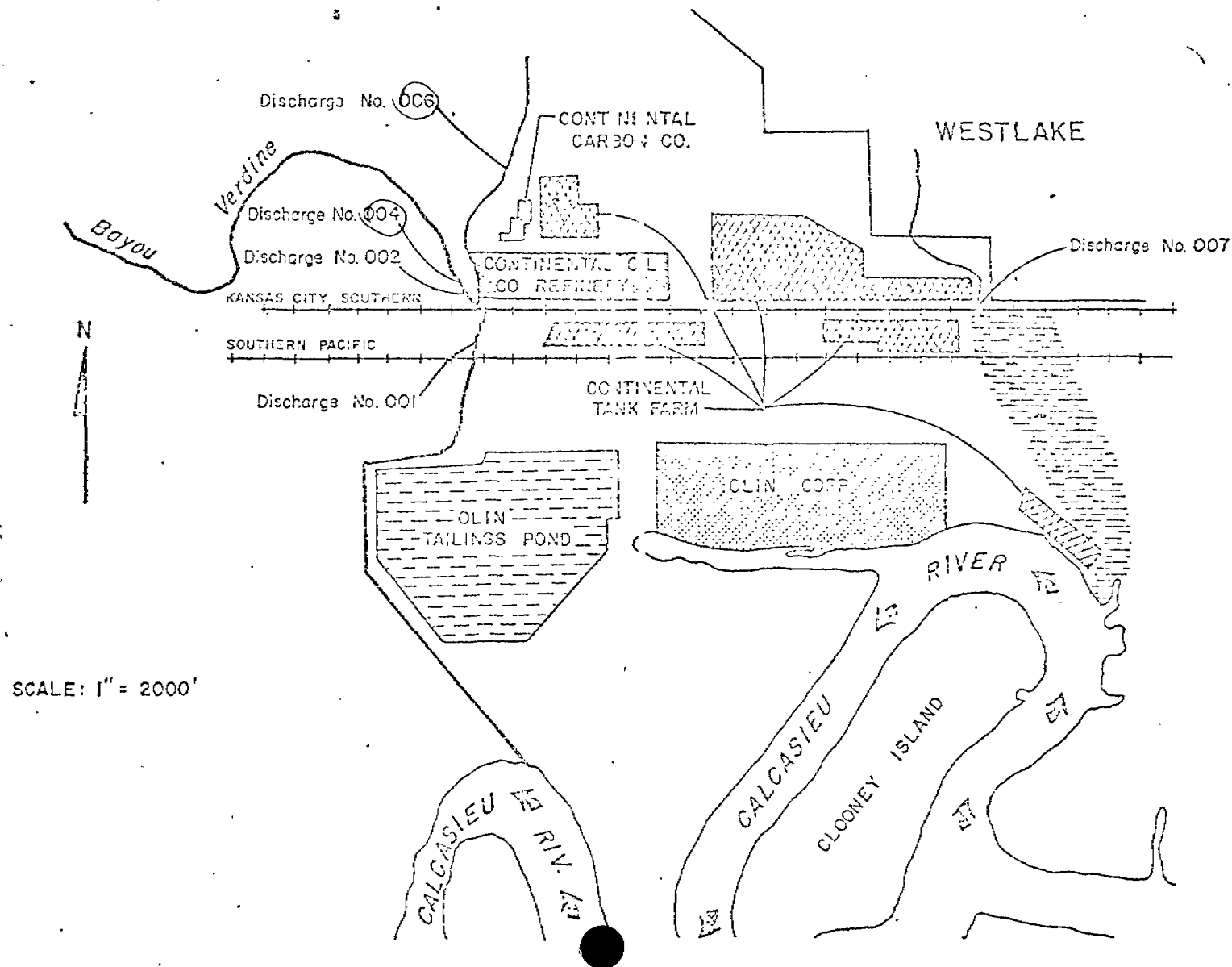
Foaming or Frothing Materials - None of a persistent nature.

Coliforms (MPN/100ml) - The monthly median shall not exceed 542/100ml, nor shall this count exceed 1750/100ml in more than 10% of the samples in any one month.

The proposed permit conditions and limitations were developed and are based on (1) consideration of applicable water quality standards and (2) efficient application of best practicable control technology currently available.

Information and copying. Persons wishing further information may write to the above address or call the Permits Branch Office at (214) 749-1923. Copies of the application, proposed permit including proposed effluent limitations and special conditions, comments received, and other documents (other than those which the Regional Administrator maintains as confidential) are available at the Permits Branch for inspection and copying. A copying machine is available for public use at a charge of \$0.20 per copy sheet.

Register of interested persons. Any person interested in a particular application or group of applications may leave his name, address, and phone number as part of the application file. The list of names will be maintained as a means for persons with an interest in an application to contact others with similar interests.



CCR 000036490



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

FACT SHEET

• APPLICATION FOR NPDES PERMIT TO DISCHARGE TO WATERS OF THE
UNITED STATES

Permit No. LA 0003026

Application No. LA-07V-OXK-2-000401 April 27, 1973

Continental Oil Company

Lake Charles Refinery

P. O. Box 37

Westlake, Louisiana 70669

has applied for an NPDES permit to discharge pollutants into waters of the United States.

Applicant is a petroleum refinery processing 96,000 barrels of crude oil per day. Five existing discharges are described in the application. Discharge Serial No. 001 contains process water, contaminated storm water and spent caustic. This stream is treated biologically and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 002 contains storm water runoff, cooling tower blowdown, once-through cooling water, and power plant wastes. This stream undergoes primary settling and is discharged to the Calcasieu River via Bayou Verdine. Discharge Serial No. 004 consists of boiler blowdown, cooling water, surface runoff, and excess water from the coker cooling pond. Discharge Serial Nos. 006 and 007 consist of storm water from tank farm areas. Discharges 001, 002, 004 and 006 are discharged into Bayou Verdine one and one-half miles upstream from the Calcasieu River. Discharge 007 is discharged into a ditch, with the discharge point one-half mile from the Calcasieu River.

CCR 000036491

The receiving waters are classified for propagation of aquatic life, recreation, navigation and low grade industrial supply when necessary adaptations are made by industry.

A more complete description of the discharges and a sketch of their locations follow below.

The application, proposed permit including proposed effluent limitations and special conditions, comments received, and other information is on file and may be inspected and copied in Suite 1142, 1600 Patterson Street, Dallas, Texas 75201, at any time between 8:00 a.m. and 4:30 p.m., Monday through Friday. The proposed staff determinations contained herein are tentative. Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the above address, attention: Permits Branch, within 30 days of the date of this Fact Sheet. The application number should appear next to the above address on the first page of any submitted comments. All comments or objections received within 30 days of the date of this Fact Sheet will be considered in the formulation of final determinations regarding the application.

A public hearing on the issuance of this permit will be held beginning at 1:00 p.m. on May 31, 1973, at Sheraton-Delta Motor Hotel, Delta Ballroom, Canal St. & Claiborne Ave., New Orleans, La. 70112. Requests to be a party to the public hearing must be made in writing to the Regional Administrator at the letterhead address and must state with particularity any objection to the issuance of the proposed permit and the issues of fact, law or policy which are proposed to be considered at the hearing. All hearing proceedings will be transcribed verbatim and made available to the public at cost. The hearing will be conducted in conformance with the "Notice of Proposed Rule Making" for the National Pollutant Discharge Elimination System as published in the Federal Register of January 11, 1973 - Section 125.34. Pursuant to guidelines set forth in that proposed regulation the hearing will be held in conformance with the requirements of subparagraphs (l), (m) and (n) of Section 125.34 and all testimony will be taken under oath, with cross-examination allowed. Any party to the hearing may give oral or written statements and recommendations; other persons in attendance can submit written statements.

An initial decision concerning modifications, if any, of the proposed permit conditions will be issued within 20 days of the public hearing and the expiration of the 30-day comment period. The result of this initial decision as to the proposed permit will become the Regional Administrator's final determination 10 days thereafter unless a written request for finding of fact and opinion is submitted to the Regional Administrator prior to the final determination date. Upon issuance of any requested findings of fact and opinion by the Hearing Officer, the Regional Administrator will simultaneously issue his final determination.

DESCRIPTION OF EXISTING DISCHARGES (As reported by applicant):

Discharge _____: Sum of 001, 002, 004, 006 and 007
 Average Flow: 2,960,000 gallons per day

<u>Constituents</u>	<u>Lbs/Day</u>
pH	6.3 - 8.5
Temperature	70° - 115°F
BOD ₅	1,955
COD	5,750
TDS	28,800
TSS	2,102
Ammonia	366
Oil & Grease	1,720
Phenol	9.8
Chromium	13.4

PROPOSED DETERMINATIONS

On the basis of preliminary staff review, the Environmental Protection Agency proposes to issue a permit to discharge subject to effluent limitations and certain other conditions. The following is a brief description of the proposed effluent limitations and special conditions.

PROPOSED EFFLUENT LIMITATIONS:

- (1) The pH of the effluent shall not be less than 6.0 nor greater than 9.0 at any time.
- (2) Temperature of the effluent shall be equal to, or less than, 97°F based on a 30-day average, but never to exceed 115°F for any instantaneous maximum. The effluent shall not raise the temperature of the receiving body more than 3°C above the normal ambient water temperature nor cause the temperature of the receiving body to exceed 36°C.
- (3) The effluent shall contain neither visible foam nor visible floating solids at any time.
- (4) The effluent shall not contain detectable, settleable solids.
- (5) The effluent limitations which follow are based on a present, daily average plant production level of 85,000 barrels per day crude oil and 16,000 barrels per day equivalent purchased feed.

Until December 31, 1975, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002,004,006, 007	BOD ₅	1,955	2,440	4,000
	COD	5,750	7,187	10,000
	TOC	2,125	2,826	3,825
	TSS	2,102	2,796	4,000
	Ammonia	366	460	700
	Oil & Grease	1,720	2,150	3,200
	Phenol	10	12	15
	Chromium	8	10	12

After December 31, 1975, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

Flow: 2.02 mgd.

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>mg/l</u>	<u>Oper. Avg. (lbs/day)</u>	<u>mg/l</u>	<u>30-Day Avg. (lbs/day)</u>	<u>mg/l</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002 & 007	BOD ₅	16	262	21	349	47	786
	COD	79	1,332	109	1,776	143	2,398
	TOC	28.5	480	38	640	51	864
	TDS		Report				
	TSS	24	402	32	536	72	1,206
	Ammonia	7.6	128	10	170	14	230
	Oil & Grease	6	102	8	136	14	230
	Phenol	0.12	2.0	0.15	2.5	0.21	3.6
	Chromium	0.24	4.0	0.30	5.0	0.42	7.0
	Sulfide	0.15	2.5	0.20	3.4	0.27	4.5

PROPOSED SCHEDULE FOR COMPLIANCE

The permittee would be required to achieve the effluent levels described above in accordance with the following compliance schedule:

Completion of preliminary plans by December 31, 1973

Final plans by August 31, 1974

Contract awarded by December 31, 1974

Commencement of construction by March 31, 1975

Completion of construction by September 30, 1975

Operational level attained by December 31, 1975

PROPOSED SPECIAL CONDITIONS

The applicant would be required to operate his treatment facilities at maximum efficiency at all times.

MONITORING AND REPORTING

The applicant would be required to monitor his discharges according to the following sampling schedule and report the results to the Regional Administrator and the Louisiana Stream Control Commission each month.

Sampling Schedule:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002, 004, 006 & 007	Flow	Continuous	Record
	pH	Continuous	Record
	Temperature	Continuous	Record
	BOD ₅	Once per week	24 hr. composite
	COD	3 times/week	24 hr. composite
	TOC	3 times/week	24 hr. composite
	TDS	3 times/week	24 hr. composite
	TSS	3 times/week	24 hr. composite
	Ammonia	3 times/week	24 hr. composite
	Oil & Grease	Daily - 3 grabs per day	Grab
	Phenol	3 times/week	24 hr. composite
	Chromium	3 times/week	24 hr. composite
	Sulfide	3 times/week	24 hr. composite

In addition to the Monitoring and Reporting requirements set forth above, the permittee would be required to establish, maintain and report any other information which the Regional Administrator may require to carry out the objectives of the Federal Water Pollution Control Act Amendments of 1972.

CCR 000036495

APPLICABLE WATER QUALITY STANDARDS OF RECEIVING WATERS

pH - Within the range of 6.5 - 8.5.

Dissolved Oxygen - Not less than 50% of saturation at existing water temperature.

Temperature - Not to be raised more than 3°C above normal ambient water temperature, nor to exceed a maximum of 36°C.

Oils - There shall be no slicks of free or floating oil present in sufficient quantities to interfere with the designated uses, nor shall emulsified oils be present in sufficient quantities to interfere with the designated uses.

Toxic Materials - None present in quantities that alone or in combination will be toxic to animal or plant life. In all cases the level shall not exceed the TLM_{48/10}.

Foaming or Frothing Materials - None of a persistent nature.

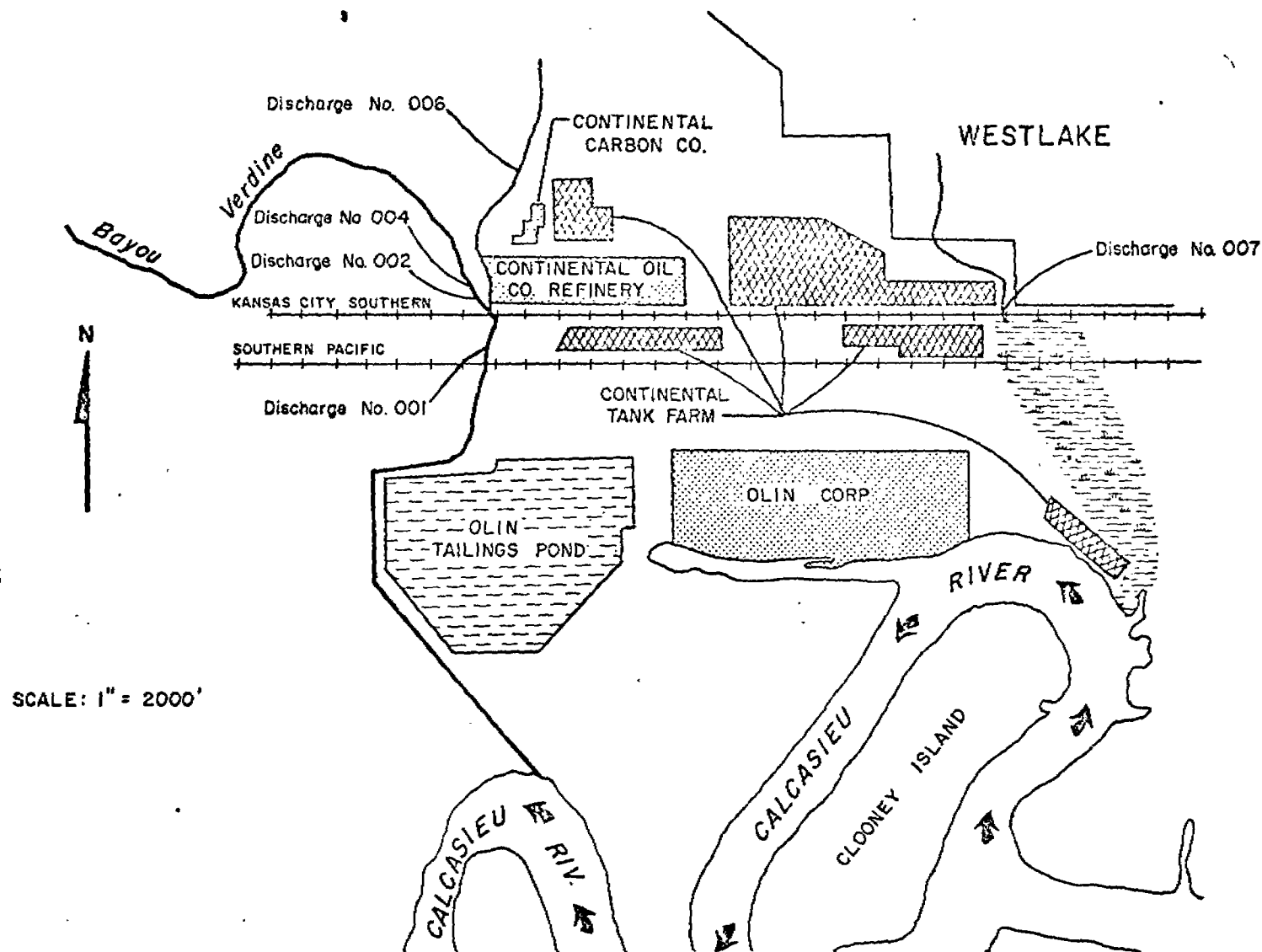
Coliforms (MPN/100ml) - The monthly median shall not exceed 542/100ml, nor shall this count exceed 1750/100ml in more than 10% of the samples in any one month.

The proposed permit conditions and limitations were developed and are based on (1) consideration of applicable water quality standards and (2) efficient application of best practicable control technology currently available.

Information and copying. Persons wishing further information may write to the above address or call the Permits Branch Office at (214) 749-1983. Copies of the application, proposed permit including proposed effluent limitations and special conditions, comments received, and other documents (other than those which the Regional Administrator maintains as confidential) are available at the Permits Branch for inspection and copying. A copying machine is available for public use at a charge of \$0.20 per copy sheet.

Register of interested persons. Any person interested in a particular application or group of applications may leave his name, address, and phone number as part of the application file. The list of names will be maintained as a means for persons with an interest in an application to contact others with similar interests.

CCR 000036497





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

FACT SHEET

. APPLICATION FOR NPDES PERMIT TO DISCHARGE TO WATERS OF THE
UNITED STATES

Permit No. LA 0003115

Application No. LA-07V-0XK-2-000414 April 27, 1973

Gulf Oil Company - U. S.

Alliance Refinery

P. O. Box 395

Belle Chasse, Louisiana 70037

has applied for an NPDES permit to discharge pollutants into waters of the United States.

Applicant is a petroleum refinery processing 190,000 barrels of crude oil per day. All of the refinery's wastewater effluent, treated and untreated, is combined into one discharge. Once-through cooling water, water treatment plant blowdown, and boiler blowdown are discharged untreated. Process water, ballast water, storm runoff, cooling tower blowdown, and sanitary wastes are treated before discharge. The combined discharge is pumped into the Mississippi River at approximately Mississippi River Mile 62.5 AHP at Alliance, Louisiana.

CCR 000036498

The receiving waters are classified for the following purposes: domestic or industrial water supply, propagation of aquatic life, agricultural water, recreation, and other legitimate uses.

A more complete description of the discharges and a sketch of their locations follow below.

The application, proposed permit including proposed effluent limitations and special conditions, comments received, and other information is on file and may be inspected and copied in Suite 1142, 1600 Patterson Street, Dallas, Texas 75201, at any time between 8:00 a.m. and 4:30 p.m., Monday through Friday. The proposed staff determinations contained herein are tentative. Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the above address, attention: Permits Branch, within 30 days of the date of this Fact Sheet. The application number should appear next to the above address on the first page of any submitted comments. All comments or objections received within 30 days of the date of this Fact Sheet will be considered in the formulation of final determinations regarding the application.

A public hearing on the issuance of this permit will be held beginning at 4:00 p.m. on May 31, 1973, at Sheraton-Delta Motor Hotel, Delta Ballroom, Canal St. & Claiborne Ave., New Orleans, La. 70112. Requests to be a party to the public hearing must be made in writing to the Regional Administrator at the letterhead address and must state with particularity any objection to the issuance of the proposed permit and the issues of fact, law or policy which are proposed to be considered at the hearing. All hearing proceedings will be transcribed verbatim and made available to the public at cost. The hearing will be conducted in conformance with the "Notice of Proposed Rule Making" for the National Pollutant Discharge Elimination System as published in the Federal Register of January 11, 1973 - Section 125.34. Pursuant to guidelines set forth in that proposed regulation the hearing will be held in conformance with the requirements of subparagraphs (l), (m) and (n) of Section 125.34 and all testimony will be taken under oath, with cross-examination allowed. Any party to the hearing may give oral or written statements and recommendations; other persons in attendance can submit written statements.

An initial decision concerning modifications, if any, of the proposed permit conditions will be issued within 20 days of the public hearing and the expiration of the 30-day comment period. The result of this initial decision as to the proposed permit will become the Regional Administrator's final determination 10 days thereafter unless a written request for finding of fact and opinion is submitted to the Regional Administrator prior to the final determination date. Upon issuance of any requested findings of fact and opinion by the Hearing Officer, the Regional Administrator will simultaneously issue his final determination.

DESCRIPTION OF EXISTING DISCHARGES (As reported by applicant):Discharge 001 : Total Plant EffluentAverage Flow: 23,440,000 gallons per day

<u>Constituents</u>	<u>Lbs/Day</u>
Ammonia	660
Total Organic Carbon	7,542
BOD ₅	5,003
COD	6,655
Chromium	28
Oil & Grease	850
Phenol	23
Sulfide	31
Total Suspended Solids	13,074

PROPOSED DETERMINATIONS

On the basis of preliminary staff review, the Environmental Protection Agency proposes to issue a permit to discharge subject to effluent limitations and certain other conditions. The following is a brief description of the proposed effluent limitations and special conditions.

PROPOSED EFFLUENT LIMITATIONS:

(1) The pH of the effluent shall not be less than 6.0 nor greater than 9.0 at any time.

(2) The temperature of the effluent shall be equal to or less than 97°F for process water and 115°F for once-through cooling water based on a 30-day average, but never to exceed 115°F and 120°F, respectively, for any instantaneous maximum. The effluent shall not raise the temperature of the receiving body more than 3°C above the normal ambient water temperature nor cause the temperature of the receiving body to exceed 36°C.

(3) The effluent shall contain neither visible foam nor visible floating solids at any time.

(4) The effluent shall not contain detectable, settleable solids.

(5) The effluent limitations which follow are based on a present, daily average plant production level of 190,000 barrels per day of crude oil.

Until January 1, 1976, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
001	Ammonia		660	990
	TOC		7,542	10,560
	BOD ₅		5,003	11,555
	COD		6,655	10,833
	Chromium		28	40
	Oil & Grease		850	1,275
	Phenol		23	69
	Sulfide		31	139
	TSS		13,074	38,800

After January 1, 1976, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
001	Ammonia	219	292	394
	TOC	657	876	1,182
	BOD ₅	438	584	1,320
	COD	3,285	4,380	5,913
	Chromium	8	10	14
	Oil & Grease	219	292	394
	Phenol	2	3	4
	Sulfide	4.5	6	8
	TSS	548	730	1,650

PROPOSED SCHEDULE FOR COMPLIANCE

The permittee would be required to achieve the effluent levels described above in accordance with the following compliance schedule:

Completion of preliminary plans by December 31, 1973

Final plans by December 31, 1974

Completion of construction by July 1, 1975

Operational level attained by January 1, 1976

PROPOSED SPECIAL CONDITIONS

The applicant would be required to operate his treatment facilities at maximum efficiency at all times.

MONITORING AND REPORTING

The permittee shall monitor and record the quality and quantity of each discharge according to the schedule below and other provisions. For purposes pertaining to the monitoring report, the permittee's effluent is separated into the following designated portions:

<u>Discharge Serial No.</u>	<u>Inplant Description</u>
001	Uncontaminated once-through cooling water.
002	Biological pond effluent.
003	Boiler and river water treatment blowdown along with ballast and other streams.
004	Uncontaminated storm water run-off which bypasses treatment.

Sampling Schedule:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002, 003, 004	Flow	Continuous	Record
	pH	Continuous	Record
	Temperature	Continuous	Record
Sum of 002, 003	NH ₃	Daily	24 hr. composite
	TOC	Daily	24 hr. composite
	BOD ₅	3 times/week	24 hr. composite
	COD	Daily	24 hr. composite
	Total Chromium	3 times/week	24 hr. composite
	Oil & Grease	3 times/week	Grab
	Phenol	Daily	24 hr. composite
	Sulfide	3 times/week	24 hr. composite
	TSS	Daily	24 hr. composite
	TDS	3 times/week	24 hr. composite

Discharge Serial Nos. 001 and 004 must be monitored by a continuous analyser of a carbon parameter such as TOC or TOD in order to insure that these remain uncontaminated. In addition to the Monitoring and Reporting

requirements set forth on the previous page, the permittee would be required to establish, maintain and report any other information which the Regional Administrator may require to carry out the objectives of the Federal Water Pollution Control Act Amendments of 1972.

APPLICABLE WATER QUALITY STANDARDS OF RECEIVING WATERS

pH - Within the range of 6.5 - 9.0.

Dissolved Oxygen - Not less than 75% of saturation at existing water temperature.

Temperature - Not to be raised more than 3°C above normal ambient water temperature, nor to exceed a maximum of 36°C.

Oils - There shall be no slicks of free or floating oil present in sufficient quantities to interfere with the designated uses, nor shall emulsified oils be present in sufficient quantities to interfere with the designated uses.

Toxic Materials - None present in quantities that alone or in combination will be toxic to animal or plant life. In all cases the level shall not exceed the TLM_{48/10}.

Foaming or Frothing Materials - None of a persistent nature.

Coliforms (MPN/100ml) - The monthly medial shall not exceed 1600/100ml nor shall this count exceed 5420/100ml in more than 10% of the samples in any one month.

The proposed permit conditions and limitations were developed and are based on (1) consideration of applicable water quality standards and (2) efficient application of best practicable control technology currently available.

Information and copying. Persons wishing further information may write to the above address or call the Permits Branch Office at (214) 749-1983. Copies of the application, proposed permit including proposed effluent limitations and special conditions, comments received, and other documents (other than those which the Regional Administrator maintains as confidential) are available at the Permits Branch for inspection and copying. A copying machine is available for public use at a charge of

CCR 000036503

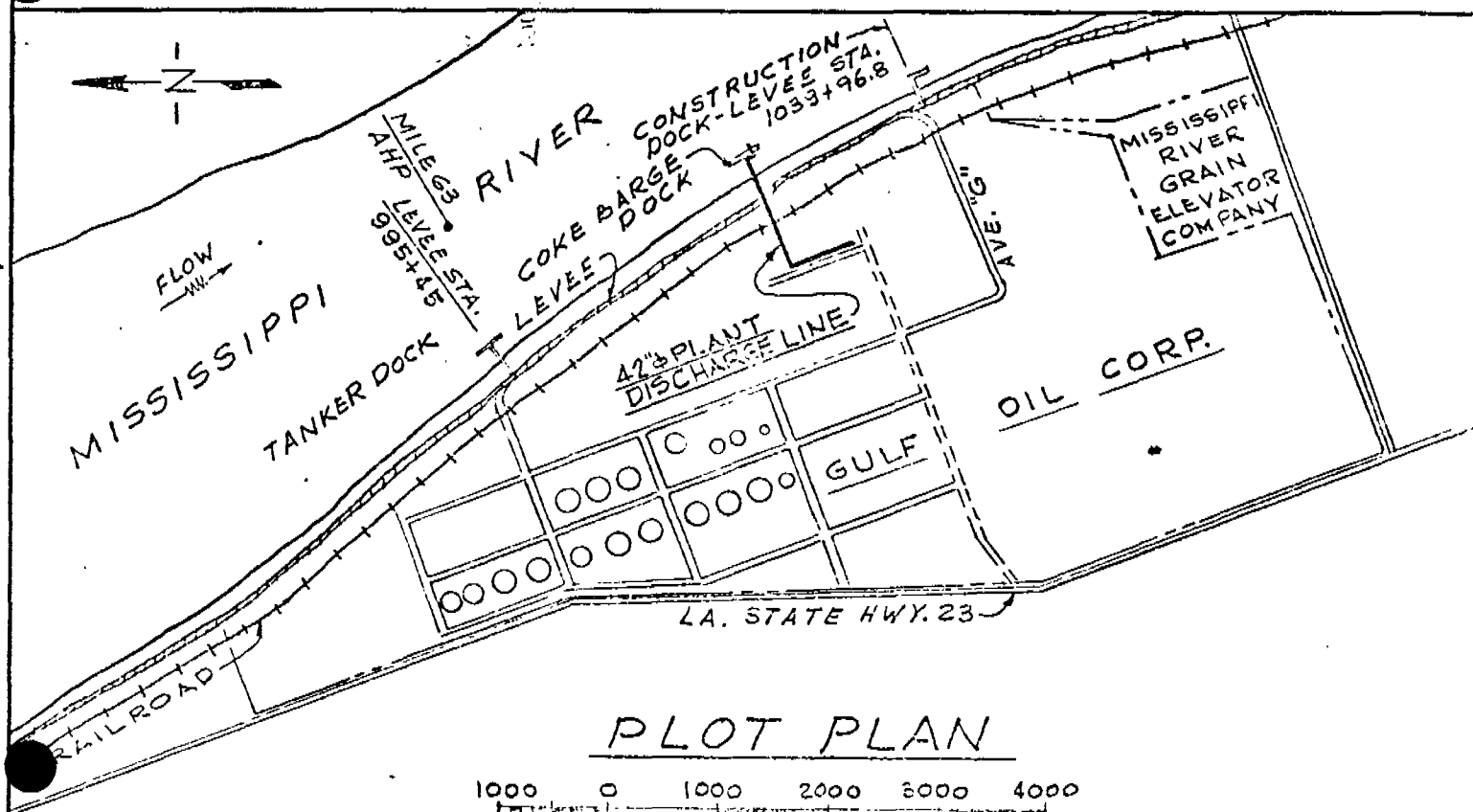
\$0.20 per copy sheet.

Register of interested persons. Any person interested in a particular application or group of applications may leave his name, address, and phone number as part of the application file. The list of names will be maintained as a means for persons with an interest in an application to contact others with similar interests.

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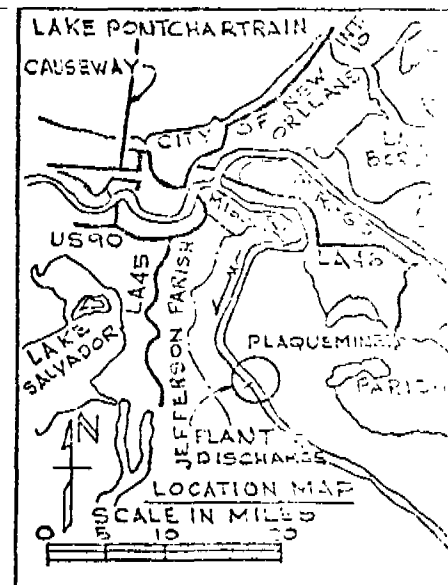
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PLOT PLAN

1000 0 1000 2000 3000 4000

SCALE OF FEET



CCR 000036505

MAP TAKEN FROM U.S.C. & G.S. QUADRANGLE OF THE MISSISSIPPI RIVER

GULF OIL CO. - U.S. REFINERY
ALLIANCE, LA. MAY 1971

PLANT DISCHARGE
TO
MISSISSIPPI RIVER

SHT. 1 OF 1



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1600 PATTERSON, SUITE 1100
DALLAS, TEXAS 75201

FACT SHEET

APPLICATION FOR NPDES PERMIT TO DISCHARGE TO WATERS OF THE
UNITED STATES

Permit No. LA 0005584

Application No. LA-07V-0XK-2-000706 April 27, 1973

Exxon Company, U. S. A.

Exxon Baton Rouge Refinery

P. O. Box 551

Baton Rouge, Louisiana 70802

has applied for an NPDES permit to discharge pollutants into waters
of the United States.

Applicant is a petroleum refiner of crude oil and manufacturer of lube oil and industrial organic chemicals. The refinery processes 466,000 barrels of crude oil per day. Two existing discharges are described in the application. Discharge Serial No. 002 is comprised of river silt and water treatment chemicals from the applicant's river water clarification plant. Discharge Serial No. 001 consists of effluent from the refinery's Master Separator. All of the refinery's wastes such as process water, cooling tower blowdown, boiler blowdown, storm water runoff, etc., are discharged through the Master Separator. Both discharges are presently into the Mississippi River.

CCR 000036506

The receiving waters are classified for the following purposes: domestic and industrial water supply, propagation of aquatic life, agricultural water, recreation, and other legitimate uses.

A more complete description of the discharges and a sketch of their locations follow below.

The application, proposed permit including proposed effluent limitations and special conditions, comments received, and other information is on file and may be inspected and copied in Suite 1142, 1600 Patterson Street, Dallas, Texas 75201, at any time between 8:00 a.m. and 4:30 p.m., Monday through Friday. The proposed staff determinations contained herein are tentative. Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the above address, attention: Permits Branch, within 30 days of the date of this Fact Sheet. The application number should appear next to the above address on the first page of any submitted comments. All comments or objections received within 30 days of the date of this Fact Sheet will be considered in the formulation of final determinations regarding the application.

A public hearing on the issuance of this permit will be held beginning at 9:00 a.m. on May 31, 1973, at Sheraton-Delta Motor Hotel, Delta Ballroom, Canal St. & Claiborne Ave., New Orleans, La. 70112. Requests to be a party to the public hearing must be made in writing to the Regional Administrator at the letterhead address and must state with particularity any objection to the issuance of the proposed permit and the issues of fact, law or policy which are proposed to be considered at the hearing. All hearing proceedings will be transcribed verbatim and made available to the public at cost. The hearing will be conducted in conformance with the "Notice of Proposed Rule Making" for the National Pollutant Discharge Elimination System as published in the Federal Register of January 11, 1973 - Section 125.34. Pursuant to guidelines set forth in that proposed regulation the hearing will be held in conformance with the requirements of subparagraphs (l), (m) and (n) of Section 125.34 and all testimony will be taken under oath, with cross-examination allowed. Any party to the hearing may give oral or written statements and recommendations; other persons in attendance can submit written statements.

An initial decision concerning modifications, if any, of the proposed permit conditions will be issued within 20 days of the public hearing and the expiration of the 30-day comment period. The result of this initial decision as to the proposed permit will become the Regional Administrator's final determination 10 days thereafter unless a written request for finding of fact and opinion is submitted to the Regional Administrator prior to the final determination date. Upon issuance of any requested findings of fact and opinion by the Hearing Officer, the Regional Administrator will simultaneously issue his final determination.

DESCRIPTION OF EXISTING DISCHARGES (As reported by applicant):

Discharge 001 : Master Separator Effluent
 Average Flow: 21,600,000 gallons per day

<u>Constituents</u>	<u>Lbs/Day</u>
Total Organic Carbon	35,910
Chemical Oxygen Demand	74,000
Total Dissolved Solids	210,000
Total Suspended Solids	0
Oil & Grease	8,250
Ammonia (N)	10,640
Phenol	206
Chromium	85
Cobalt	61
Copper	27
Lead	14
Mercury	0.06
Zinc	36

Discharge 002 : Clarifier Sludge Effluent
 Average Flow: 87,000 gallons per day

<u>Constituents</u>	<u>Lbs/Day</u>
---------------------	----------------

The discharge, which contains river silt and water treatment chemicals, is released after each 200,000 gallons of feed. The discharge is at a rate of approximately 700 gpm for two minutes. Raw river water is then flushed through the line for one minute. The composition of the discharge is highly variable due to the variations in the solids content of the incoming river water, the flushing operation and the feed rate.

PROPOSED DETERMINATIONS

On the basis of preliminary staff review, the Environmental Protection Agency proposes to issue a permit to discharge subject to effluent limitations and certain other conditions. The following is a brief description of the proposed effluent limitations and special conditions.

PROPOSED EFFLUENT LIMITATIONS:

(1) The pH of the effluent shall not be less than 6.0 nor greater than 9.0 at any time.

(2) Temperature of the effluent shall be equal to, or less than, 97°F based on a 30-day average, but never to exceed 115°F for any instantaneous maximum. The effluent shall not raise the temperature of the receiving body more than 3°C above the normal ambient water temperature nor cause the temperature of the receiving body to exceed 36°C.

(3) The effluent shall contain neither visible foam nor visible floating solids at any time.

(4) The effluent shall not contain detectable, settleable solids.

(5) The effluent limitations which follow are based on a present, daily average plant production level of 450,000 barrels of crude oil processed per day and 16,000 barrels per day of equivalent purchased feed.

Until July 1, 1973, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002	TOC	26,900	35,910	45,000
	Oil & Grease	10,000	15,960	20,000
	Ammonia (N)	6,100	10,640	12,000
	Phenol	250	399	500
	Chromium	85	85	85
	Cobalt	61	81	110
	Copper	27	36	49
	Lead	14	19	25
	Zinc	36	48	65

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After July 1, 1973, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002	TOC	21,200	21,200	35,910
	TSS	11,000	15,000	20,000
	Oil & Grease	7,000	7,000	12,500
	NH ₃	3,900	3,900	6,100
	Phenol	206	206	399
	Chromium	85	85	85
	Cobalt	61	81	110
	Copper	27	36	49
	Lead	14	19	25
	Zinc	36	48	65

After December 31, 1975, the permittee would be authorized to discharge an effluent whose characteristics will not exceed the values listed below:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Oper. Avg. (lbs/day)</u>	<u>30-Day Avg. (lbs/day)</u>	<u>Max. Daily (lbs/day)</u>
Sum of 001, 002	TOC	3,420	4,446	6,840
	TOD	22,800	29,640	45,600
	TSS	2,280	2,964	6,840
	Oil & Grease	1,140	1,482	2,280
	NH ₃	1,140	1,482	2,280
	Phenol	11	14	20
	Sulfide	20	26	50
	Chromium	11	14	14
	Cobalt	61	61	61
	Copper	27	36	49
	Lead	11	11	11
	Mercury	0.1	0.1	0.1
	Zinc	114	114	114

CCR 000036510

PROPOSED SCHEDULE FOR COMPLIANCE

The permittee would be required to achieve the effluent levels described above in accordance with the following compliance schedule:

Completion of preliminary plans by June 30, 1973
 Final plans by March 31, 1974
 Contract awarded by August 31, 1974
 Commencement of construction by December 31, 1974
 Completion of construction by September 30, 1975
 Operational level attained by December 31, 1975

PROPOSED SPECIAL CONDITIONS

The applicant would be required to operate his treatment facilities at maximum efficiency at all times.

MONITORING AND REPORTING

The applicant would be required to monitor his discharges according to the following sampling schedule and report the results to the Regional Administrator and the Louisiana Stream Control Commission each month.

Sampling Schedule:

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002	Flow	Continuous	Record
	pH	Continuous	Record
	Temperature	Continuous	Record
	TOC	Daily	24 hr. composite
	TOD	Daily	24 hr. composite
	TDS	Once per week	24 hr. composite
	TSS	Daily	24 hr. composite
	Oil & Grease	Daily - 3 grabs per day	Grab
	Ammonia (N)	3 times/week	24 hr. composite
	Phenol	3 times/week	24 hr. composite

<u>Discharge Serial No.</u>	<u>Parameter</u>	<u>Min. Freq. of Analysis</u>	<u>Sample Type</u>
001, 002	Sulfide	Once per week	24 hr. composite
	Chromium	3 times/week	24 hr. composite
	Cobalt	Once per week	24 hr. composite
	Copper	Once per week	24 hr. composite
	Lead	Once per week	24 hr. composite
	Mercury	Once per week	24 hr. composite
	Zinc	Once per week	24 hr. composite
	Cadmium	Once per week	24 hr. composite

In addition to the Monitoring and Reporting requirements set forth on the prior page, the permittee would be required to establish, maintain and report any other information which the Regional Administrator may require to carry out the objectives of the Federal Water Pollution Control Act Amendments of 1972.

APPLICABLE WATER QUALITY STANDARDS OF RECEIVING WATERS

pH - Within the range of 6.5 - 9.0.

Dissolved Oxygen - Not less than 75% of saturation at existing water temperature.

Temperature - Not to be raised more than 3°C above normal ambient water temperature, nor to exceed a maximum of 36°C.

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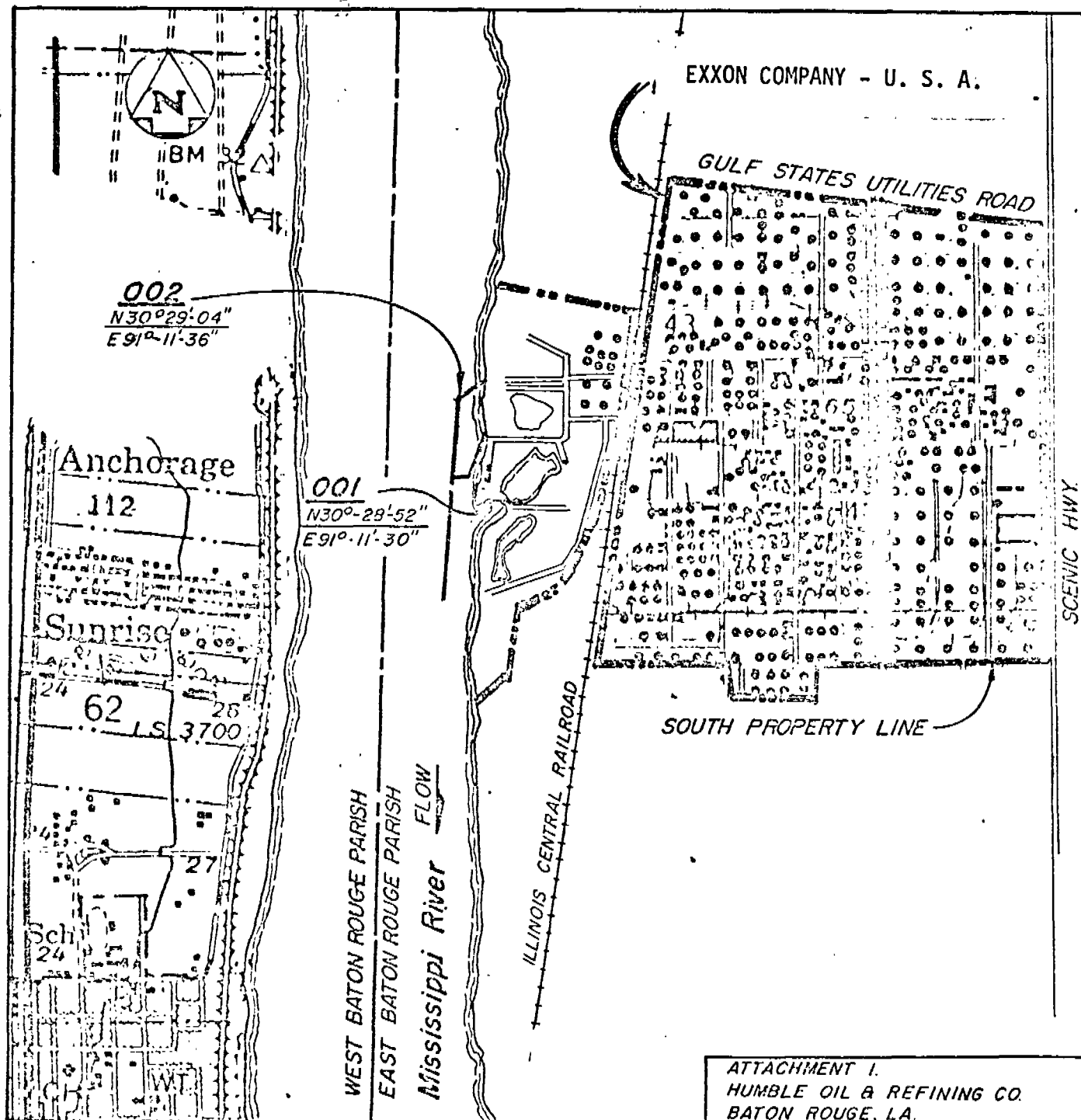
The proposed permit conditions and limitations were developed and are based on (1) consideration of applicable water quality standards and (2) efficient application of best practicable control technology currently available.

CCR 000036512

Information and copying. Persons wishing further information may write to the above address or call the Permits Branch Office at (214) 749-1983. Copies of the application, proposed permit including proposed effluent limitations and special conditions, comments received, and other documents (other than those which the Regional Administrator maintains as confidential) are available at the Permits Branch for inspection and copying. A copying machine is available for public use at a charge of \$0.20 per copy sheet.

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NOTE: COPY MADE FROM U.S. DEPARTMENT OF THE
INTERIOR GEOLOGICAL SURVEY, BATON ROUGE
QUADRANGLE - 1963

ATTACHMENT I.
HUMBLE OIL & REFINING CO.
BATON ROUGE, LA.
BATON ROUGE REFINERY
EXISTING MASTER SEPARATOR (001)
& RIVER WATER CLARIFICATION PLANT (002,
DISCHARGE POINTS

0 1000' 2000'

SHEET 1 OF 1

DATE: JUNE 1971

CCR 000036514

AMERICAN PETROLEUM

1801 K STREET, NORTHWEST



INSTITUTE

WASHINGTON, D.C. 20006

RECEIVED

1972
D. I. SAMSELL

Committee on Environmental Affairs

A. R. RESCORLA
Assistant Director

(202) 833-5595

December 5, 1972

DePinae
Ken PH
JDM
↓
[initials]

R.C. Mallatt
American Oil Company
910 South Michigan Avenue
Chicago, Illinois 60680

Dear Russ:

Please find enclosed a copy of the Effluent Limitation Guidance for the Refuse Act Permit Program released to the EPA regions during October. It will be noted the actual values reported in Attachments A and B have not changed from those included in the draft reviewed with Tom Belk and Carl Schafer on October 13th.

As indicated during our discussions with EPA on October 13th, the section pertaining to violations has been removed. Copies of these guidelines have been included in the Water Quality Subcommittee minutes. I hope you will find these guidelines a useful reference.

Best wishes for a very happy holiday season and a good 1973.

Sincerely,

[Signature]
A.R. Rescorla
Assistant Director

ARR: vf

cc. P.N. Gammeigard, w/att.
H.H. Meredith, Jr., w/att.
L.A. McReynolds, w/att.
T.R. Samsell, w/att.
W.H. Baker, w/att.
C.B. Scott, w/att.
J.W. Van Ert, w/att.
S. Bard, w/att.
A.R. Artkens, w/att.
F.C. Anderegg, w/att.
E. Cotton, w/att.
R.S. Cramer, w/att.
G.A. Smalley, w/att.

CCR 000036515

EFFLUENT LIMITATION GUIDANCE

for

THE REFUSE ACT PERMIT PROGRAM

PETROLEUM REFINING INDUSTRY

OCTOBER 1972

CCR 000036516

GENERAL

This guidance for the establishment of effluent limitations for discharges in the Petroleum Refining industry sets forth numerical waste load guidelines based on the application of "best practicable control technology currently available." Attachment A values reflect the Agency's best technical judgment of the effluent levels which can be achieved by the application of the highest level of control technology which is now considered "practicable" and "currently available" for the industry.

Attachment A values are based on technology, including demonstration projects, pilot plant, and actual use, which demonstrates that it is technologically and economically feasible.

Entirely new refineries should achieve Attachment A values on start-up. Existing refineries should be required to adopt an abatement program designed to achieve Attachment A levels by January 1, 1976. In some cases economic and social factors may affect the practicability of applying control techniques to achieve these values, and if so, will require some modification of Attachment A values as to particular plants. These instances should be kept to an absolute minimum. Guidance on the economic and social factors which may require that you consider such modifications, as well as more detailed explanation of the engineering assumptions underlying the Attachment A values, will be provided at technical seminars to be conducted concerning each industrial category.

Attachment B values represent the minimum acceptable effluent levels for the Petroleum Refining Industry (SIC 2911). No plant should achieve less pollution reduction than Attachment B values. Attachment B values may be

applied where a discharger has, at the time the permit is issued, commenced and made substantial progress on an abatement program scheduled to be completed within 24 months or less from the time the discharge permit is issued. If the plant also has extensive on-going pollution abatement programs in other environmental areas such as air pollution, the Regional Administrator may modify this 24 month period.

STANDARD INDUSTRIAL CLASSIFICATION INCLUDED

Only one Standard Industrial Classification is covered by these guidelines:

SIC - 2911: Petroleum Refining

The American Petroleum Institute (API) has divided refineries into 5 somewhat arbitrary classifications which recognize varying degrees of processing complexity.

Classification

A	Crude topping
B	Topping and cracking and/or reforming
C	Topping and cracking and petrochemicals
D	"B" Category and lube oil processing
E	"D" Category and petrochemicals

"Petrochemicals" excludes all first generation conventional refinery associated production such as BTX, alkenes, alkanes, alkynes, and other miscellaneous items such as hydrogen, sulfur, coke or carbon black and ammonia. To qualify as a class "C" or "E" refinery, intermediate chemical manufacture must be shown, including such typical products as cumene, phthalic anhydride, alcohols, ketones, trimer (nonene), and styrene.

Lube oil processing excludes formulating blended oils and additives. It requires production of blending stocks via such operations as dewaxing, lube hydrotreating, and clay treatment.

Substantial deviations from the definition under each of the above refinery classification categories should be accommodated by adjusting the waste load assignments for a particular plant.

APPLICATION OF EFFLUENT LIMITATIONS

The effluent limitations shown in Attachments A & B are expressed in pounds per thousand barrels (lb/1000 bbl) of crude or other feedstocks processed.

Essentially the policy is that water users are responsible for their impact on the receiving water system - therefore they are only responsible for NET pollutant removal in cases where their water source is the same as the receiving water. But, in cases where the water source is different from the receiving water, they are responsible for gross pollutant removal.

Gross removal will be required even where net removal may be justified unless source water contaminant levels are significant, ie, greater than 10% of the raw waste load for the applicant under consideration.

Some illustrations follow:

A. User withdraws water from a river (eg Mississippi), and without pretreatment uses it, and discharges downstream in the same river: The plant discharge limitation may be increased by the pollutant load of the source water.

CCR 000036519

A-1. Same situations but user pretreats water before use (e.g., silt removal etc.): The plant effluent limitation is increased by the pollutant load of the source water minus the pollutant load removed in pretreating. Pollutants removed in pretreatment may not be discharged to the river without including them in plant effluent load (which is limited by "effluent limitation" calculated as described.)

B. User withdraws water from a river, uses it, and discharges it to a different river: The plant effluent limitation is applied without adjustment for pollutants contained in the source water.

B-1. User withdraws "fresh" water from an underground aquifer, uses it, and discharges it to a river: The plant effluent limitation is applied without adjustment for pollutants contained in the source water.

Other Net/Gross Considerations

1. Thermal pollution is included in the above illustrations as a pollutant, with specific guidance and limitations to be forwarded at a later date.
2. The economic impact of double analytical requirements implicit in illustrations "A" and "A-1" may be ameliorated at Regional Administrator's discretion. For example, if sufficient data can be shown that source water pollutant load is well established, RA may authorize modified effluent limitations which account source load as "Constant". The source water analytical requirements may be therefore reduced, but not eliminated.

3. If source water is of good quality but has different chemical constituents, judgements must be used in considering effects of the presence of additional constituents. (eg hardness)

The flows in gallons per barrel and the concentrations in milligrams per liter (mg/l) which were used in developing these effluent limitations are shown for information purposes only, in Appendix I-A and I-B. The discharge from a refinery should be limited on total pounds of each pollutant per day.

To determine the total pounds allowed per day the barrels of crude (or other feedstocks) input per stream day shown on the application should be used. Many refineries operate a few percent above or below this value. If such a deviation is found a judgement must be made as to which value should be used.

Many refineries have more than one discharge. Discharges may be limited singly or as a group or a combination of single discharges and groups. The refinery pollutant load limitation is to be applied to the sum of the pounds of pollutants from all discharges.

It should be noted that limitations are not placed on total water usage or on total dissolved solids. However, when the discharge of dissolved solids may cause harm to the receiving water or cause a violation of existing water quality standards limits will be established.

RATIONALE USED IN DEVELOPMENT OF EFFLUENT LIMITATIONS

These effluent limitation guidelines require that best practicable control technology currently available be applied to all wastewater discharges.

In determining the treatment requirements for the Petroleum Refining Industry, the following basic ideas should be taken into consideration:

1. The treatment required for industrial wastes should include "good industrial practice" and tight process control must at least equitable with the level of treatment required for municipal sewage.
2. It should be technically and economically feasible.
3. The treatment results should be translated into allowable discharge loads in terms of "pounds per day" for each of the contaminants, taking into account the capacity and processing complexity employed in a refinery.
4. Once the effluent waste loads are established, a refinery should not be restricted to specific treatment methods.

Wastewater from the petroleum refining industry is, in general, relatively treatable. A review of the waste treatment methods currently being practiced by this industry indicates that biological treatment methods are generally satisfactory in removing the major contaminants from the wastewater.

Treatment models representing "best practicable treatment" are described. They are not intended to specify procedures or processes, but to illustrate and demonstrate the means by which "A" level requirements may be met. The unit operations may vary in hydraulic order and relative size and importance according to the needs of a specific refinery. Alternatives which will achieve the same end are acceptable, the models being neither

CCR 000036522

inclusive nor exclusive of any or all given unit operations.

It should be understood that before biological treatment, some pre-treatment steps such as removal of high concentrations of hydrogen sulfide, ammonia and oil may be required. Biological systems are sensitive to shock loads which can be overcome with good plant operation and/or equalization ponds.

Physical/chemical systems normally involve the use of sand filters and activated carbon. The advantages of this system are that shock loads do not greatly affect the performance, they are flexible and can easily be added to, and occupy about 1/7 the land that a biological system needs. Ammonia nitrogen can be removed by stripping or by selective ion exchange. Several references indicate that the cost of an activated carbon system is approximately the same as that of a biological system. Two major refineries have physical/chemical systems in development or under construction. General applicability to refinery effluent remains to be demonstrated.

In view of changing legislation of water quality requirements it is important that the treatment process be adaptable to future processing schemes, and it is felt that both the physical/chemical & biological systems shown fit this need.

In developing these limitations, two possible treatment system models were used, one physical/chemical, the other biological:

Physical/Chemical

1. API Oil Separators
2. Chemical Coagulation and Clarification
3. pH Control
4. Sand Filters
5. Chromate removal system
6. Ammonia stripper or ion exchange
7. Carbon adsorbers
8. Carbon reactivation system

Biological

1. API Oil Separators
2. Equalization
3. Sour Water Stripping
4. Dissolved Air Flotation
5. Biological Oxidation, using aerated lagoons
or activated sludge.
6. Secondary Clarification
7. Chromate Removal System
8. Dual Media Filter

SPECIAL CONSIDERATIONS IN APPLYING EFFLUENT GUIDELINES

Socio/economic impact is the most important consideration when reviewing water pollution abatement programs and compliance schedules for a given refinery. In applying these effluent guidelines, it must be recognized that the costs of achieving incremental improvements in effluent quality

and therefore, economic impact, will vary widely among individual refineries. Factors which could influence the relative cost of various waste treatment alternatives include:

Availability of land: If it has access to a large land area, a refinery can install long-residence time lagoons and/or activated-sludge treatment facilities to achieve satisfactory removals. A land-short refinery may be unable to do so.

Types of crude oils and products: The composition of the crude oil and the types of raw materials and process materials affect the raw waste load production, as does the final product mix.

Once-through cooling water: Factors that can affect cost-effectiveness include, location, existing tubular heat exchange capacity, water temperature, availability of suitable makeup water, and the like.

Refinery complexity: The refinery classification system may tend to overstate or understate the raw waste load potential of certain unusual processing configurations.

Refinery Age and Layout: Problems, particularly in older refineries, may be encountered with segregation of process, cooling, boiler house, storm, sanitary, and other waters to meet proposed effluent limitations.

Climate and geographical location: Low ambient temperatures inhibit biological treatment, and high annual rainfall complicates water handling.

Available resources needed to accomplish such programs: If an approved pollution abatement program should entail major modifications to in-plant process units which would result in extended shutdown time and loss of production for either the process unit affected or for the refinery,

the reviewer should adjust the compliance schedule so that shutdowns will coincide with normal and reasonable refinery turnaround and inspection schedules. Examples include major changes to on-line process piping and heat exchangers.

SAMPLING AND MONITORING

The parameters required to be monitored and reported are shown in the table below:

"Minimum Required Sampling and Monitoring Frequency"

<u>Parameter</u>	<u>Sample and Analysis Frequency</u>
Ammonia (Nitrogen)	24-hour composite two times weekly
BOD ₅	24-hour composite two times weekly
COD	24-hour composite two times weekly
Hexavalent Chromium	24-hour composite two times weekly
Total Chromium	24-hour composite two times weekly
Phenol	24-hour composite two times weekly
Sulfide	24-hour composite two times weekly
Suspended Solids	24-hour composite two times weekly
Total Dissolved Solids	24-hour composite two times weekly
pH	Continuously Recorded
Oil and Grease	Grab sample three times weekly

CCR 000036526

Flow

Continuously Recorded

Temperature

Continuously Recorded

Samples should be taken from the final effluent at the point of discharge to the receiving stream. It may be necessary to separately sample treated cooling water and treated process effluent prior to mixing in order to obtain valid analytical results.

Attachment A

PETROLEUM REFINING
EFFLUENT GUIDELINES

4
(Pounds of Pollutant per 1000 bbl/Stream Day)

<u>Refinery</u> <u>Class</u>	<u>NH₃</u> <u>(N)</u>	<u>TOC</u> ¹	<u>BOD</u> ₅	<u>COD</u>	<u>Cr⁺⁶</u>	<u>Cr^t</u>	<u>O&G</u>	<u>Phenol</u>	<u>Sulfide</u>	<u>TSS</u>
A	1.6	4.0	2.5	15.3	0.0008	0.041	1.66	0.017	0.028	3.3
B	3.3	8.0	5.0	30.6	0.0017	0.083	3.34	0.033	0.057	6.6
C	4.7	11.6	7.3	44.6	0.0021	0.104	4.18	0.042	0.071	8.3
D	5.0	16.0	10.0	61.0	0.0025	0.125	5.00	0.050	0.085	10.0
E	7.5	27.0	16.8	102.9	0.0038	0.187	7.50	0.075	0.128	15.0

NOTES:

1. TOC is shown as a possible organic monitoring parameter. Either TOC or TOD may be used for estimating BOD, using an agreed correlation factor for the refinery.

2. Refer to Appendix I-A for concentrations and water use rates used in developing the table.

CCR 000036528

Attachment B
PETROLEUM REFINING
EFFLUENT GUIDELINES

(Pounds of Pollutant per 1000 bbl/Stream Day)

<u>Refinery Class</u>	<u>NH₃ (N)</u>	<u>TOC¹</u>	<u>BOD₅</u>	<u>COD</u>	<u>Cr⁺⁶</u>	<u>Cr^t</u>	<u>O&G</u>	<u>Phenol</u>	<u>Sulfide</u>	<u>TSS</u>
A	4.3	4.6	3.3	18.3	0.0008	0.083	2.50	0.050	0.067	6.6
B	8.7	14.1	10.1	55.4	0.0017	0.168	5.04	0.168	0.336	13.4
C	10.8	17.5	12.5	68.8	0.0021	0.209	6.25	0.209	0.417	16.6
D	18.5	23.5	17.5	96.5	0.0025	0.250	7.50	0.250	0.500	20.0
E	27.8	36.8	26.3	144.8	0.0038	0.375	11.26	0.375	0.751	30.0

NOTES:

1. TOC is shown as a possible organic monitoring parameter. Either TOC or TOD may be used for estimating BOD, using an agreed correlation factor for the refinery.

2. Refer to Appendix I-B for concentrations and water use rates used in developing the table.

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Appendix I-A

Concentrations and Flows Used for Computing Attachment A Pounds/Day Waste Load Limits

(Milligrams of Pollutants per Liter of Water Discharged) (ppm)

<u>Refinery Class</u>	<u>Flow gal/bbl</u>	<u>NH₃ (N)</u>	<u>TOC*</u>	<u>BOD₅</u>	<u>COD**</u>	<u>Cr⁺⁶</u>	<u>Cr^t</u>	<u>O&G</u>	<u>Phenol</u>	<u>Sulfide</u>	<u>TSS</u>
A	20	10.0	24.0	15.0	92.0	0.005	.25	10.0	0.1	0.17	20.0
B	40	10.0	24.0	15.0	92.0	0.005	.25	10.0	0.1	0.17	20.0
C	50	10.0	28.0	17.0	106.0	0.005	.25	10.0	0.1	0.17	20.0
D	60	10.0	32.0	20.0	122.0	0.005	.25	10.0	0.1	0.17	20.0
E	90	10.0	36.0	22.0	137.0	0.005	.25	10.0	0.1	0.17	20.0

* TOC=BOD x 1.6

** COD=BOD x 6.1

NOTE:

Organic Parameter to be used for monitoring may be TOC, TOD, or other parameter where an appropriate correlation factor can be agreed upon.

Appendix I-B

Concentrations and Flows used for Computing Attachment B Pounds/Day
Waste Load Limits

(Milligrams of Pollutants per Liter of Water Discharged)

<u>Refinery</u> <u>Class</u>	<u>Flow</u> <u>gal/bbl</u>	<u>NH₃</u> <u>(N)</u>	<u>TOC*</u>	<u>BOD₅</u>	<u>COD**</u>	<u>Cr⁺⁶</u>	<u>Cr^t</u>	<u>O&G</u>	<u>Phenol</u>	<u>Sulfide</u>	<u>TSS</u>
A	20	26.0	28.0	20.0	110.0	0.005	0.5	15.0	0.3	0.4	40.0
B	40	26.0	42.0	30.0	165.0	0.005	0.5	15.0	0.5	1.0	40.0
C	50	26.0	42.0	30.0	165.0	0.005	0.5	15.0	0.5	1.0	40.0
D	60	37.0	47.0	35.0	193.0	0.005	0.5	15.0	0.5	1.0	40.0
E	90	37.0	49.0	35.0	193.0	0.005	0.5	15.0	0.5	1.0	40.0

*TOC = BOD x 1.4

**COD = BOD x 5.5

NOTE:

Organic parameter to be used for monitoring may be TOC, TOD, or other parameter where an appropriate correlation factor can be agreed upon.